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Cooperative Extension Work in Agriculture and Home Economics.

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FARMERS' COOPERATIVE DEMONSTRATION WORK

SOME SUGGESTIONS ON CORN GROWING.

Corn is capital, and when rightly invested in food for man or beast, returns greater dividends than any other farm crop. Practically one-third of the area of farm crops, and one-fifth of the improved farm lands of the United States, is devoted to corn. Except in a few localities in the United States, a man's standing in the community as a farmer is rated by his ability and achievements in corn production. It is the greatest and surest source of food on the farm. Increased production is easily secured by increasing the acreage or growing more corn per acre. The latter means is the most economical, when obtained by improved soil or soil conditions, good seed, proper fertilization and cultivation. The greatest increase in yield must be expected from improved soil conditions.

SELECTION OF THE LAND. Ideal soil for corn is a well drained, deep, loose loam, well supplied with decayed organic matter to hold moisture and possible plant food. This soil is seldom found. Corn is being grown on a greater variety of agricultural soils than any other crop. Many of these soils are too poor to grow corn profitably, but should first be built up. This building up can not be permanently or profitably done by the use of commercial fertilizers alone, but when rightly combined with manure and legumes, this insures real, legitimate profit.

After the condition of the soil, water is the determining factor in corn production, 350 to 700 pounds being required to make one pound of dry matter.

PLOWING. Break corn land eight inches deep. This plowing should be done in the fall or winter, unless a cover crop is grown or the land washes, runs together or is thin; otherwise, plow in the early spring, at a time puddling or clods will not occur. If the land has not been broken to the above depth at some former plowing, increase the depth of plowing gradually, by plowing each time not more than two inches deeper in the fall, and one inch deeper in the spring.

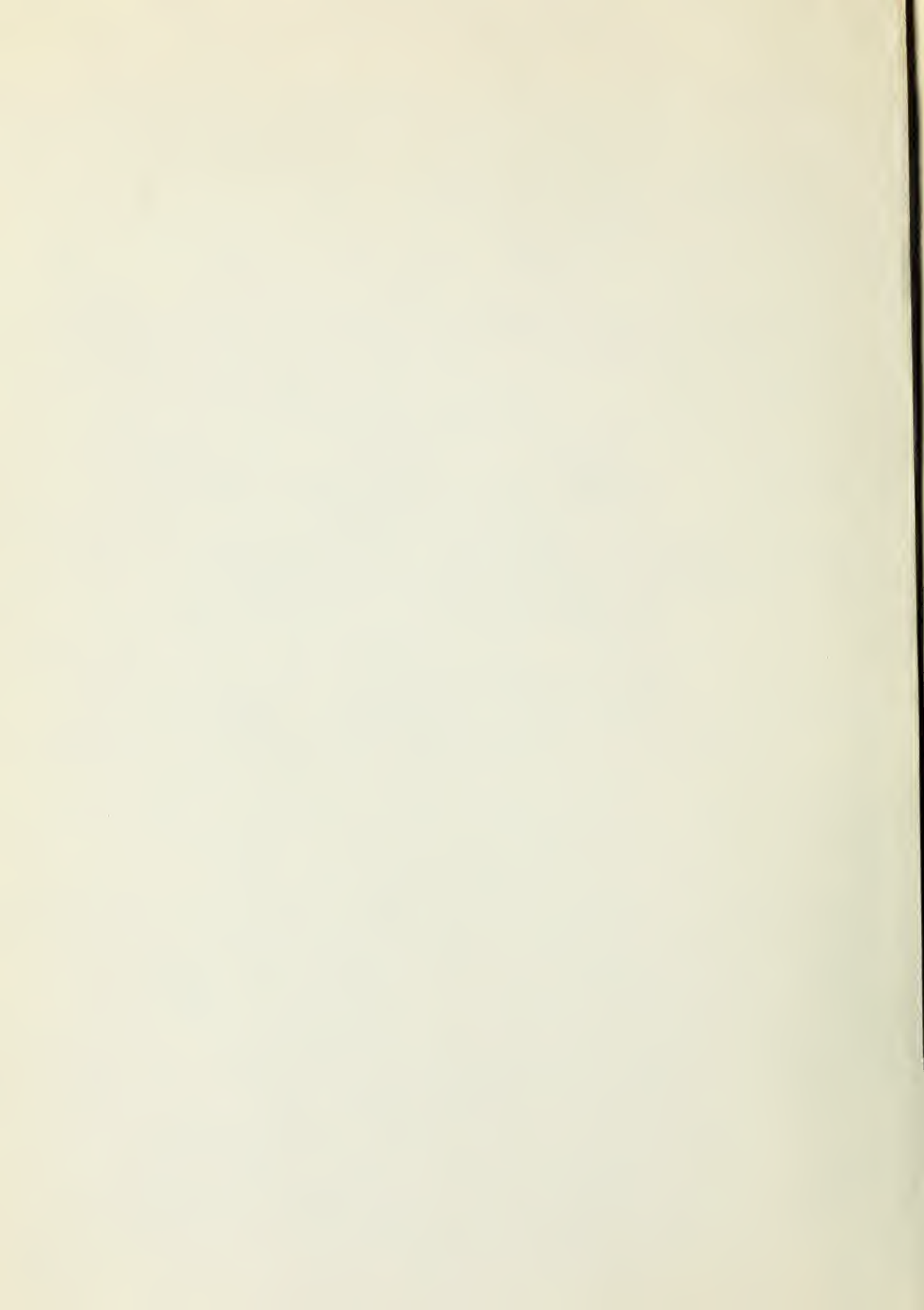
In the spring harrow every half day's plowing, to prevent clods. Fall and winter plowing can be left rough during the winter. Sod lands, unless rolling, inclined to pack or thin, are best plowed in the fall or winter. Disking before plowing conserves moisture and tends to prevent clods.

THE SEED BED. No amount of cultivation after planting can make up for neglect preparing the seed bed. Disc and harrow fall plowing at least twice before planting. Spring plowing will need the same treatment, and often more. Mash any clods present with a plank drag. Harrow the land often enough before planting to keep it soft and moist and destroy young weeds.

FERTILIZERS. The kind and quantity varies with soil characteristics and conditions. Stable manure and turned-under legumes stand first in value, and should be the source of nitrogen. Phosphoric acid pays on almost all soils, and potash on many, especially those that are light colored, sandy or thin. Three hundred pounds of 16% acid phosphate and 40 pounds of muriate of potash should give good results. If the potash is not needed, it should not be applied. If soil is deficient in nitrogen and no manure or legumes are used, apply 100 pounds of nitrate of soda broadcast in the row when the corn is 12 to 18 inches high. All fertilizers except nitrate of soda should be applied broadcast and harrowed into the soil when the seed bed is being prepared.

SEED CORN. Any pure variety that fields and matures well in the locality should be planted. Use only live, tested seed. Nub and tip all ears before shelling, otherwise the seed can not be evenly dropped by the planter. Never import seed corn for the main crop. If new seed is necessary, get it from some neighbor. When starting with a new variety, get only enough for a small plot. If the variety proves successful, seed can be selected for next year's planting.

TIME TO PLANT. Plant as soon as the ground is warm enough for prompt germination, and not before. Early planting generally gives best results. Aim to finish by May 10th.



Local conditions, such as late seasons, rainfall, cold soils, or the presence of a cover crop, sometimes delay the time of planting.

METHOD OF PLANTING. The difference in yield between planting in checks or in the drill is slightly in favor of the latter, but generally, the difference is not great enough to pay for the extra labor required to destroy the weeds in the drill. A good rule to follow is: If the land is foul with weed seed, or labor is scarce, check the corn; if the land is clean, either method can be employed; if it is rolling land, drill the corn, by all means.

Planting on the level is easiest and best, except in wet, stiff bottoms, where ridging is likely to prove most successful. On certain loose, dry, sandy soils or late in a dry spring, planting in a shovel furrow gives good results.

RATE OF PLANTING. Yield is closely related to the rate of planting. If maximum results are expected, plant as thick as the land will bear. Generally thicker planting than is customary will give greater yield. Always plant enough corn to insure a stand, as replanting seldom pays. The rate of planting depends upon the fertility and preparation of the land. On good soils three stalks per hill, in $3\frac{1}{2}$ foot checks, or 14 inches apart in $3\frac{1}{2}$ foot rows, is about the right thickness. On average soils $2\frac{1}{2}$ stalks per hill, or 18 inches in the drill, is advised. On poor soils such as should not be planted to corn, thin rather than heavy planting gives the best yields. For maximum yields on highly prepared and fertilized soil, 12,000 to 15,000 stalks per acre are necessary.

DEPTH OF PLANTING. Plant only deep enough to insure moisture for good germination. Early in the spring on a well prepared seed bed, one inch is deep enough. Later, two or three inches deep may be necessary.

CULTIVATION. This should be shallow, to conserve moisture, liberate plant food, kill weeds and allow roots to feed in the rich top soil. Harrowing corn a few days after planting destroys weeds just sprouting, and allows the first cultivation to be delayed a few days. After the corn is up, cultivate with a smoothing harrow or a weeder at least once. This can be done until the corn is six to eight inches high. The first cultivation other than the above may be deep, but before the corn is six inches high. All other cultivation should be shallow - not over two inches deep - unless after a hard, packing rain, when a little deeper cultivation is permissible if the corn is not over 12 inches high.

Cultivation should be every eight or ten days, or oftener if a crust is formed, and should be continued until corn is five feet high. In case of dry weather, a dust mulch should be maintained until silking time.

SUCKERS. Suckering depends on the fertility of the soil, the amount of water present, and the variety of corn. Thicker planting tends to reduce the number of suckers. Experiments show no advantage gained by pulling the suckers; however, seed stalks make better ears than those made on suckers. If suckering is done, do it when the ground is moist and before the corn is eight inches high.

HARVESTING. Pulling fodder should never be practiced, because the gathering is very hard and expensive; in damp weather it is difficult to cure the blades and on an average one bushel of corn is lost by shrinkage for every 100 pounds of fodder saved.

If the corn is harvested for the grain alone, it should be gathered as early as the corn is dry enough, so it will have a chance to dry out and freezing will not injure its germination. If the corn is used for silage, it should be cut when in a hard glaze.

